

Claims:

1. A fluid absorbent article for surgical applications comprising:

a top layer including an apertured film having a plurality of apertures formed therein, each aperture including a base and an apex with the aperture base oriented in an upper surface of the top layer and the apex positioned a depth below the base and upper surface;

an absorbent layer including an absorbent media positioned to underlie the top layer generally coextensive with the top layer and receive fluids passing through the top layer, the absorbent media operable for dispersing and containing the fluid within the article;

bases of the apertures having a plurality of generally straight sides and positioned with respect to the upper surface to present a plurality of different angles to fluid flowing on the upper surface to hinder and divert the fluid so that it more readily passes through the apertures to the absorbent layer;

a bonding layer including a bonding media positioned between the top layer and absorbent layer and operable for bonding the apices of the apertures to the absorbent media generally over the length and width of those layers, to secure the layers together generally over the length and width of the fluid absorbent article while generally maintaining the depths of the apertures of the top layer .

2. The fluid absorbent article of claim 1 wherein the bonding media has a tack after curing which is reduced over 60 percent from its tack prior to curing.

3. The fluid absorbent article of claim 1 wherein said bonding media is applied between the layers in a plurality of strands, the strands having a width dimension less than the depth of the apertures of the top layer for bonding the top layer to the absorbent layer primarily at the apices of the apertures.

4. The fluid absorbent article of claim 1 wherein said apertures have a depth in the range of 200 to 800 microns.

5. The fluid absorbent article of claim 1 wherein the apertured film, generally between the apertures, has a thickness in the range of 0.5 to 5 mils.

6. The fluid absorbent article of claim 1 wherein said aperture apices have a minimum width dimension, the bonding media being applied between the layers in a plurality of strands, the strands having a width dimension less than the minimum width dimension of the aperture apices so that the bonding layer does not significantly interfere with the flow of fluid through the top layer.

7. The fluid absorbent articles of claim 1 wherein said aperture apices have an average width dimension in range of approximately 30 to 45 mils.

8. The fluid absorbent articles of claim 1 wherein said aperture bases have an average width dimension in range of approximately 30 to 60 mils.

9. The fluid absorbent article of claim 1 wherein said apertures define an open area over the upper surface in the range of approximately 15 to 35 percent.

10. The fluid absorbent article of claim 1 wherein said bonding layer creates a bond strength of at least approximately 20 grams/inch.

11. The fluid absorbent article of claim 11 wherein at least one of said apertures has a base which is generally pentagonal in shape.

12. The fluid absorbent article of claim 11 wherein a plurality of said apertures have a pentagonal shaped base and are arranged in hexagonal groupings.

13. The fluid absorbent article of claim 1 wherein said bonding media is applied between the layers in a plurality of strands wound in spirals, the spirals having a diameter in the range of approximately 1 to 12 inches.

14. The fluid absorbent article of claim 1 wherein said bonding media is applied between the layers in a plurality of strands, the strands having a width in the range of approximately 5 to 25 mils.

15. The fluid absorbent article of claim 1 wherein the absorbent media is selected from the material group consisting of polyester, polyolefins, acrylics, rayons, cotton, cellulose materials and blends of those materials.

16. A fluid absorbent article for surgical applications comprising:

a top layer including an apertured film having a plurality of apertures formed therein, each aperture including a base and an apex with the aperture base oriented in an upper surface of the top layer and the apex positioned a depth below the base and upper surface:

an absorbent layer including an absorbent media positioned to underlie the top layer generally coextensive with the top layer and receive fluids passing through the top layer, the absorbent media operable for dispersing and containing the fluid within the article;

a bonding layer including a bonding media positioned between the top layer and absorbent layer and operable for bonding the apices of the apertures to the absorbent media generally over the length and width of those layers, to secure the layers together generally over the length and width of the fluid absorbent article while generally maintaining the depths of the apertures of the top layer, the bonding media having a tack after curing which is reduced over 60 percent from its tack prior to curing.

17. The fluid absorbent article of claim 16 wherein said bonding media is applied between the layers in a plurality of strands, the strands having a height dimension less than the depth of the apertures of the top layer for bonding the top layer to the absorbent layer primarily at the apices of the apertures.

18. The fluid absorbent article of claim 16 wherein said apertures have a depth in the range of 200 to 800 microns.

19. The fluid absorbent article of claim 16 wherein the apertured film, generally between the apertures, has a thickness in the range of 15 to 125 microns.

20. The fluid absorbent article of claim 16 wherein said aperture apices have a minimum width dimension, the bonding media being applied between the layers in a plurality of strands, the strands having a width dimension less than the minimum width dimension of the aperture apices so that the bonding layer does not significantly interfere with the flow of fluid through the top layer.

21. The fluid absorbent article of claim 16 wherein said apertures define an open area over the upper surface in the range of approximately 15 to 35 percent.

22. The fluid absorbent article of claim 16 wherein said bonding layer creates a bond strength of at least approximately 20 grams/inch.

23. The fluid absorbent article of claim 16 wherein said bonding media is applied between the layers in a plurality of strands wound in spirals, the spirals having a diameter in the range of approximately 1 to 12 inches.

24. The fluid absorbent article of claim 16 wherein said bonding media is applied between the layers in a plurality of strands, the strands having a width in the range of approximately 5 to 25 mils.